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ABSTRACT

Testimony about the role of federal leadership in facilitating district-level reform efforts is presented in this report. Data were derived from a literature review and consultation with school reform experts. Further data were collected from visits to four districts--Johnson City, New York; Moss Point, Mississippi; Pittsburgh, Pennsylvania; and San Diego, California--where interviews were conducted with participants in district reform and school/district records were reviewed. Each district engaged in systemwide reform in which standards, curricula, and instruction focused on student outcomes and on student-assessment-guided instruction. Findings indicate that the federal role was limited in the areas of categorical aid programs, at-risk students, and systemwide technical assistance. It is recommended that voluntary national standards be established as a first step, supplemented by Congressional action to encourage district reform. Appendices include a summary of reform efforts in the four districts, a list of major contributors to the report, and a list of six related General Accounting Office products. Three tables are included. (LMI)

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United States General Accounting Office

GAO

Report to Congressional Requesters

April 1993

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SYSTEMWIDE EDUCATION REFORM

Federal Leadership Could Facilitate District-Level Efforts

EA 024 888

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GAO

United States
General Accounting Office
Washington, D.C. 20548

Human Resources Division

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April 30, 1993

The Honorable William D. Ford
Chairman, Committee on Education and Labor
House of Representatives

The Honorable William F. Goodling
Ranking Republican Member,
Committee on Education and Labor
House of Representatives

The Honorable Dale E. Kildee
Chairman, Subcommittee on Elementary,
Secondary and Vocational Education
Committee on Education and Labor
House of Representatives

This report responds to your request for information concerning systemwide reform efforts in selected school districts in the nation. In spite of the many education reforms that occurred in the 1980s, most Americans see the nation's public elementary and secondary schools as average, at best. Only a small percentage of the nation's students can perform tasks requiring complex reasoning and problem solving. In addition, American students' achievement in mathematics and science lags behind that of their peers in other industrial nations.

Systemwide reforms are intended to address these problems in a new way. Many of the 1980s reforms addressed individual parts of the system, such as merit pay for teachers, smaller class sizes, and an increased number of academic credits for graduation.[1] A number of educators and policymakers now believe that there may be a greater chance to improve student learning if the education system as a whole is improved. Attention is being focused on change designed to improve student outcomes by determining what students should know and be able to do, and ensuring that all the key components of the educational system are directed to achieving those outcomes. The federal government historically has focused its education efforts on certain at-risk students or specific subjects, such as math; but the systemwide view of education reform implies that some change in the federal role may be needed.

In preparation for consideration of reform legislation as well as the reauthorization of the Elementary and Secondary Education Act (ESEA) of

[1]Education Reform: Initial Effects in Four School Districts (GAO/PEMD-89-28, Sept. 26, 1989).

1965,[2] you asked GAO to study systemwide education reform. You asked us to describe district-level efforts at systemwide reform to provide insights into implementation issues and results of such efforts. In particular, you requested information concerning the relation of federal education efforts, especially major programs, such as Chapter 1 of ESEA,[3] to district experience.

Background

Many of the nation's approximately 15,000 school districts and 80,000 schools are in the process of implementing some kind of education reform. Some district reforms follow state-led reform models, while others are independent. Often these reforms are not systemwide but focus on only one part of the system, such as assessment.

Many researchers and educators currently are focusing on systemwide reform as having the greatest potential to improve student learning and achieve the National Education Goals.[4] The literature generally cites five key, interrelated system components: (1) establishment of goals or standards expected of all students; (2) development of curricula linked directly to those standards; (3) use of high-quality instructional materials appropriate to the curricula; (4) institution of professional development programs to enable teachers, administrators, and other school staff to understand the curricula and the most effective ways of instructing students; and (5) creation and implementation of student assessment systems that are based directly on the curricula.[5]

The standards are the driving force in these reforms. They define what students should know and be able to do, and they apply to all students. A growing consensus exists that high standards should be set—English, for

[2]The Elementary and Secondary Education Act provides targeted programs to ensure equal access to education for particular groups of students who have been inadequately served, such as those who are poor or who have disabilities or limited English proficiency.

[3]Chapter 1 is the largest federal education program for elementary and secondary school children whose education attainment is below the level that is appropriate for their age. It serves over 5 million children through supplemental instruction in reading, math, or language arts.

[4]Early in 1990, President Bush and the nation's governors agreed to a set of six National Education Goals for the year 2000. The six goals concern (1) readiness for school, (2) graduation from school, (3) academic achievement and citizenship, (4) math and science achievement, (5) adult literacy, and (6) drug- and violence-free schools.

[5]The components we have identified in "systemwide" reform are often discussed in the literature in the context of "systemic" reform, which addresses an even broader view of the education system. See, for example, Marshall S. Smith and Jennifer O'Day, "Systemic School Reform," Politics of Education Association Yearbook 1990, p. 233-267. As defined by Smith and O'Day, systemic reform involves not only the key components of the system, but all levels of the education system—national, state, district, and school. Systemic reform sets high standards for all students, allows substantial flexibility for teachers, and holds the system accountable for student outcomes relative to the standards.

example, should include knowledge of high-quality literature. These standards should also incorporate "higher order" skills, related to complex reasoning and problem solving, in addition to the basic reading and computational skills that were the focus of most reforms in the 1980s.

Efforts are under way on a variety of fronts to develop high national standards. In 1991, Congress created the National Council on Education Standards and Testing, which recommended setting voluntary, national standards for five core subjects (English, mathematics, science, history, and geography) and developing a system of national assessments reflecting those standards. Mathematics standards had been published a few years before, in 1989, by the National Council of Teachers of Mathematics (NCTM). These standards have served as a model for efforts in other areas. For example, the Department of Education is supporting standards-setting efforts by various organizations, such as the National Academy of Sciences and the National Center for History in the Schools. Other organizations, such as the National Council of Teachers of English, are also working to develop standards.

NCTM standards and others being developed present broad frameworks of what students should know in specific subjects. These standards, and related assessment systems, are meant to encourage reform and provide a direction for it. Local educators would have considerable flexibility in using the standards, for example, in adding content to reflect local needs and in detailing curricula.

Legislation introduced in the 103rd Congress includes provisions to provide federal support for systemwide reform. Among other things, the proposed legislation provides for funding for state and local systemwide reform efforts and for development of voluntary, high standards in key subject areas (called content standards) that should be applicable to all students. National discussion concerning setting these high standards includes discussion about the capacity of schools to provide all students an opportunity to reach these standards. The National Council on Education, Standards, and Testing recommended that school delivery standards also be set to provide a measure for a school's capacity and performance in educating students. The proposed legislation also provides for these types of standards.[6]

Assessing achievement of new, higher standards requires multiple assessment techniques, some of which were not widely used in the past,

[6]Similar legislation was considered in both the House and Senate in the 102nd Congress.

such as portfolios (collections of students' actual work), projects that students produce, student essays, or laboratory demonstrations. Such assessments present a challenge in terms of integrating them into a system to chart district, state, or national student achievement. Traditionally, multiple choice, norm-referenced tests have been used for this purpose, but they are not sufficient for measuring progress on higher order skills.

Efforts are under way at the national and state levels to develop systems to measure student progress toward achieving high standards, including higher order skills. It will take some time, however, before such assessment systems are complete. At the national level, though not federally funded, the New Standards Project is working to develop, by 1997, a national examination system tied to a shared set of high standards.[7] In school year 1992-93, the New Standards Project is field-testing sample assessment tasks related to the mathematics standards issued by NCTM and to the emerging English/language arts standards. Several states are also in the process of setting standards and developing assessments, including California, Connecticut, Kentucky, and Maine.

To respond to the Committee's request, we identified, through the literature and experts' suggestions, several districts that had significant experience implementing systemwide reform. Because we wanted to visit districts that had been implementing reform for several years, we chose four that began reform in the 1980s or earlier, before significant attention had been paid to the need for high standards involving higher order skills. Therefore, until recent years, much of these districts' efforts had been directed more toward basic skill standards.

Results in Brief

The districts we visited had developed standards for all students at each grade level that included a clear vision of the types of knowledge, skills, and abilities students needed when they graduated. This provided a focus for decisions about all other elements of the system: curriculum and instruction, professional development, and assessment. We saw in these districts a clear focus on learning and a willingness to make changes, either in individual teacher approaches or in district policies, to help students achieve.

[7]The New Standards Project is a joint program of the Learning Research and Development Center at the University of Pittsburgh and the National Center on Education and the Economy. Eighteen states and six school districts are participating in the project. It is funded by the John D. and Catherine T. MacArthur Foundation and the Pew Charitable Trusts.

Several common factors seemed important in successfully implementing reform in the districts we visited: (1) longevity of the superintendents' tenure and continuity in leadership; (2) ability and funding to obtain outside expertise from private consultants, universities, and/or state or federal assistance centers; (3) commitment to stay with the reform as it evolved slowly; and (4) capacity to involve teachers in developing and preparing to teach to the new standards. These conditions may be difficult to meet in many districts, particularly in large districts, where superintendents' average tenure is 2 years, and in those that are resource-strapped.

Existing federal programs played little part in these districts' reforms, although the districts received funding from a variety of federal categorical programs. District officials said that these programs—targeted on specific groups of at-risk students—were not supportive of reforms directed to improving achievement of all students. On the other hand, federal programs did not seem to hinder significantly reform activities.

Although our work suggests that districts may face difficulties in implementing reform, federal and state leadership could facilitate district efforts in undertaking systemwide reform driven by high standards. Voluntary national standards, if developed, could set a direction for state and local reform efforts. However, voluntary standards alone are not likely to result in widespread reform. Districts implementing systemwide reform may need substantial support.

The federal government could help ensure that districts have available the technical assistance and professional development they need to develop high standards that have local support, and to make the curricular, instructional, and assessment changes necessary to meet the standards they set. Federal strategy should balance the need for local ownership of standards and assessments against the potential inefficiencies of over 15,000 districts trying to develop standards and assessments independently. It should also recognize that it may take years to attain consensus on high national standards and related assessments and, in the meantime, many states and districts are moving ahead with reform. Finally, the federal strategy should recognize that the traditional federal focus on parts of the education system—services for specific groups of students or subject areas—may not strengthen the education system as a whole.

Scope and Methodology

We reviewed current literature and contacted experts in various aspects of school reform to obtain information about how the key components of systemwide reform can be implemented; how federal programs and other forms of support, such as research or technical assistance, might be involved; and what types of results might be expected.

We also visited four districts: Johnson City, New York; Moss Point, Mississippi; Pittsburgh, Pennsylvania; and San Diego, California. As noted earlier, we did not select these districts to be representative; we selected them because experts and literature indicated they were among the most experienced with systemwide reform. These districts vary in location, size, ethnic composition, and spending levels. Two are large, urban districts and two are small, rural ones. One district is in the South, one in the West, and two districts are in the Northeast. In three districts, minority populations constituted over 50 percent of the student enrollment. Two of the districts reported school year 1991-92 average per-pupil expenditures below the national average of $5,215: Moss Point's average was $3,315 and San Diego's was $4,670. The other two reported expenditures above the national average: Johnson City's average was $7,165 and Pittsburgh's was $6,207. The proportion of students receiving free or reduced price lunches ranged from about 33 percent to 65 percent.

The districts also differed in the extent to which reform had been implemented. Three of the districts had implemented standards and instructional changes throughout all the schools in the district by the mid-1980s. San Diego, on the other hand, began reform in the mid-1980s. That district was moving toward a model using decentralized school governance at the same time it was developing new, higher standards and accountability systems. Schools in San Diego did not begin implementing reform until the late 1980s or early 1990s. (Apps. I through IV describe the efforts undertaken in each of the four districts.)

At these districts we interviewed superintendents, subject-area specialists, federal program directors, principals, and teachers to determine what the key components of their reform were; how the reform was initiated and carried out, including who the key players were, how reform was funded, and what difficulties were encountered; and what benefits they saw as a result of the reform. We also interviewed a variety of other participants in the district reform, including, for example, school board members, parents, and union representatives, to determine what roles they played and what they saw as critical factors in successfully implementing reform in their districts. We also reviewed district and school records concerning

standards, curricula, and assessments, and conducted limited observations of classroom instruction. Where available, we obtained data related to student learning outcomes, such as test scores, dropout rates, and attendance, but we did not independently evaluate the effectiveness of the district reforms on student learning.

We did our work between September 1992 and March 1993 in accordance with generally accepted government auditing standards.

The Districts We Visited Had Undertaken Systemwide Reform

Standards, Curriculum, and Instruction Focused on Student Outcomes

The four districts that we visited had created standards and related curricula, student assessment measures, and instructional materials and also emphasized professional development for teachers. These districts articulated a clear vision of the types of knowledge and skills students need and set clear expectations for students at each grade level. For example, in the early 1980s, the Pittsburgh superintendent commissioned a needs assessment, which concluded that the district needed to focus on improving student achievement. Committees of administrators and teachers then delineated specific expectations about what students should know in each subject and at each grade level.

Each district had been working to incorporate high standards into its system in key subject areas, such as mathematics and reading. In the mathematics area, three of the four districts were working to incorporate the NCTM standards into the district standards and curriculum. The fourth district was reviewing the standards at the time of our visit. Two of the districts, Pittsburgh and San Diego, were working with the New Standards Project to develop high standards and related assessments.

The districts developed or obtained curricula and instructional materials related to the learning standards they set and trained staff to use them. Starting in 1982, Moss Point began selecting instructional packages, such as Writing Across the Curriculum, and implemented extensive training of all staff to use them. Staff were encouraged to use these prepared

instructional packages, but they were also encouraged to suggest and try other instructional methods and materials. If trials showed that the suggestion had potential to help students achieve the districtwide objectives, the district supported the use of the new approach by other teachers. Additionally, as new instructional programs became available and were adopted, the district trained teachers to use them. The superintendent stressed the need to provide staff with the necessary resources, including training and materials, to accomplish the district's objectives.

Assessment of Student Learning Guided Instruction

Student progress in achieving the standards was monitored frequently in these districts. In Pittsburgh, for example, students were assessed four to six times a year on short tests designed to monitor progress toward the district standards. Likewise, Moss Point students were tested frequently, and results were provided quickly so teachers could follow up with individual students as necessary. Moss Point teachers met in groups to discuss students who were having problems and to identify ways to help them.

Officials in the districts also pointed out that the role of the principals changed from the traditional role of administrator to that of instructional leader involved with students' progress. In Moss Point, for example, principals also received the results of the standards-related tests. They met with teachers periodically to discuss individual student progress with an aim of providing assistance when students were not meeting standards. Likewise, a principal in Johnson City described herself as being much more involved with learning and less with administration.

While each student's progress was monitored at the classroom and school level, the districts did not use aggregate data on student progress toward specific standards to measure overall school or district progress. Instead, reform efforts were tracked through the results of norm-referenced, standardized achievement tests. Such tests, though not directly linked to the districts' curricula and standards, are a recognized measure of student

achievement in basic skills, and low scores on such tests were usually one reason reform was undertaken.[8]

Three districts pointed to standardized achievement test scores as evidence of reform success. Although we cannot make a causal link to the reform—because many factors affect students' test scores—students in each of the districts made significant gains on these tests. For example, in the early 1980s, roughly one-half of Pittsburgh's students were scoring at the national norm; however, by the end of the 1980s, over three-quarters of the students were at the national norm.[9] Only about one-third of Moss Point's students were scoring at the national norm in 1978, but by 1992 about two-thirds of them were. Johnson City monitored test scores in terms of grade-equivalents.[10] Students went from scoring one-half grade above grade level in 1985 to one and one-half grades above grade level in 1991. Because San Diego's reform was directed to high standards, including higher order skills, the district did not believe test scores were reflective of its reform efforts. The district cited, instead, reduced dropout rates as one indication of progress.

On the other hand, scores did not rise for all students or in all subjects sufficiently to meet district expectations. When test scores or other indicators showed progress was not sufficient, districts made changes. In Pittsburgh, after several years, the district recognized that scores in math and science were not rising to the extent anticipated. Officials revamped their curricula and assessments and put an emphasis on math and science districtwide. Likewise, Moss Point administrators recognized that student writing was not progressing as well as they would have liked. It was these concerns that led to the instructional changes, such as introducing Writing Across the Curriculum, discussed earlier. In each case, the districts

[8]This approach is consistent with testing theory, supporting use of different types of tests for different purposes. The tests used in the districts to monitor individual student performance were criterion-referenced tests. These types of tests are directly linked to the curriculum and are meant to assist teaching and learning by showing student progress toward specific learning objectives. Norm-referenced tests, on the other hand, allow comparisons of individual or group performance against a national norm. However, use of norm-referenced tests to measure reform success has some known drawbacks. These test scores could rise for many reasons. For example, research shows that scores tend to rise when tests are given over many years and that teachers may spend considerable time in instruction aimed directly at students doing well on the tests.

[9]The national norm is the term commonly used to refer to the median score of the student sample group tested by the test publisher. Nationally, it would be expected that half of the student population would score above and half below this median.

[10]A grade equivalent is a numerical representation of a particular point in the school year. The grade equivalent 5.8, for instance, stands for the fifth grade, eighth month. If a test is administered to fifth graders in October, its norm would be reported as 5.2, and that score would represent the average performance of fifth graders who take the test at that stage in the school year.

believed that they still had not gone far enough to improve achievement, and they were implementing new approaches to integrate higher order skills.

Districts are likely to have more difficulty in measuring overall success as they incorporate new, higher standards. To measure student progress toward these new standards, districts will need a broader range of assessment instruments—such as portfolios and demonstrations. The districts we visited were developing, and training teachers to use, these relatively new types of assessments. Aggregating results of these tests to measure progress could also prove more difficult than using norm-referenced tests.

Districts We Visited Had Certain Characteristics in Common

We found several conditions common to the districts' implementation of reform: powerful leadership and vision, long-term commitment, technical assistance, additional funding, and strong support from teachers.

Vision and Long-Term Commitment Played Important Roles

Community and district personnel credited the superintendent as being the pivotal force for the reform. Each superintendent brought considerable expertise and experience to the district. These superintendents were able to provide vision and develop consensus for the need for, and ultimately the content of, reform. A key factor in their success was their longevity in the district. Each had begun reform within a few years of coming to the district and had stayed for many years.

Longevity was a key factor in maintaining commitment in the districts, because reform in these districts was a long-term and continuing effort. Three of the districts had been reforming for over a decade; the fourth had begun in the mid-1980s. In each case, as reform unfolded, all system components, including standards and assessments, were changed as the districts acquired more experience and monitored their success.

Technical Assistance and Outside Funding Were Important to Reform Efforts

Each district obtained outside help in the form of technical assistance and used local and outside funding for reform. Technical assistance has been ongoing as the reforms evolve, and districts see it as essential because of lack of time and experience among district staff. The districts hired private or university consultants to help in reform. The outside consultants

provided expertise and guidance in a variety of areas. For example, they helped in conducting needs assessments, setting standards, writing curriculum, developing assessment tools, selecting and obtaining instructional resources, and providing professional development.

Districts varied in the extent of outside assistance obtained. For example, Pittsburgh and Moss Point developed long-term relationships with consultants who were directly involved in many aspects of the reform, such as needs assessments, training, and standards development. San Diego and Pittsburgh, along with other districts, had also begun working with the New Standards Project on a long-term basis. Johnson City relied heavily on research by district personnel but also obtained assistance from a variety of sources, mostly on a short-term basis, to provide guidance on reform and training on a variety of instructional approaches.

In addition, having a state system of standards and assessments provided a starting place for San Diego's reform efforts. The California curriculum frameworks were begun in 1960, have been periodically updated, and now incorporate many higher order skills. The district has built on the California frameworks to develop its own standards and has been working with state personnel and outside consultants to develop new districtwide standards as part of its overall reform.

The districts funded reform with a mix of private and local funding sources. Private sources included foundations and local businesses. Though they saw outside funding as important, the districts funded much of their reforms from local sources. Key costs were technical assistance, professional development, and instructional materials. We could not determine the overall cost of reform, since it is integral to the regular educational process. The superintendent in one district told us that much of the reform was funded locally by redirecting district funds to reform efforts, in some cases by postponing maintenance or reducing the extent of elective programs, such as art. In that district, administrators and teachers also volunteered time to work on reform.

Teacher Support and Involvement Were Critical

Administrators said teacher support was critical and that to ensure implementation of reform efforts teachers had to be involved in the

development of the reforms.[11] The officials explained that those closest to the students—the teachers—were in the best position to judge their needs and abilities. The districts obtained teacher support by training the teachers about the need for and process of reform; involving them in writing the new standards, curricula, and assessments; and providing training in various instructional approaches.

Providing necessary staff development, training, and time to work on the standards may be one of the most difficult implementation issues for reform. The districts we visited devoted considerable energy to these purposes and used a variety of methods. Often teachers and administrators worked at least some time outside of regular work hours—sometimes in pay status, sometimes not. One district sponsored staff retreats. Several districts paid for substitutes so that teachers could work on reform or receive training during school hours. Although district officials told us this was especially helpful, it was also very expensive. Two districts established teacher centers. Pittsburgh, for example, spent about 1 percent of the district's General Fund on professional development, including establishing three teacher centers, one each at the high school, middle school, and elementary school levels. These centers provided intensive training, 5 to 8 weeks, in instructional practices and other aspects of reform. This is in marked contrast to the short-term in-service training teachers often receive.[12]

The difficulty in maintaining professional development efforts was demonstrated in at least two districts where, as district funds became more constrained, funding for professional development was reduced. For example, Johnson City recently reduced paid staff development time from 2 weeks to 1 for most teachers. Likewise, Pittsburgh has closed its teacher centers. This was due primarily to funding constraints, according to one district official.

[11]Teachers we talked with were, generally, very supportive of the reforms. However, comments by some administrators and teachers indicated that in the early days of reform there was some teacher resistance. However, it was difficult to obtain details because of the time that had elapsed. Additionally, teachers in one district noted that even currently some teachers were uncomfortable with certain instructional changes, such as those involving use of computers.

[12]Training for mathematics teachers serves as an example. In 1992 we reported that most of the in-service training funded under the Department of Education's Dwight D. Eisenhower Mathematics and Science Education Program was in the form of short-term training seminars and workshops. While this training may be helpful, many experts and researches in the field of teacher training believe that training needs to be sufficiently intense to enable teachers to understand new ways of thinking and doing, and then to incorporate them into their classroom instruction. See Department of Education: The Eisenhower Math and Science State Grant Program (GAO/HRD-93-25, Nov. 10, 1992).

Many Districts May Have Difficulty Meeting These Conditions

In the absence of state and federal actions, maintaining commitment and finding resources for systemwide reform may be difficult for many districts. Superintendent turnover is relatively high, especially in large urban districts, where the average tenure is 2 years. Frequent changes in leadership make commitment harder to maintain, especially if communities press for quick results. Also, many districts in the nation, again including many large urban districts, are facing significant financial difficulties. Finding funding and energy for reform while trying to adjust to reductions in state and local funding may make undertaking systemwide reform a more difficult task in the 1990s.[13]

Federal Role in Districts' Reform Was Limited

Federal funding played a limited role in the districts' reform efforts. Federal programs have focused on at-risk students; systemwide reform focuses on all students. In fact, districts cited emphasis by federal and state program officials on program requirements and serving specific groups of students as not supportive of reform focusing on raising outcomes for all students.

Role of Federal Categorical Programs

Each of the districts we visited received a variety of federal program funding, but those programs and funds did not play a significant part in the reform efforts. However, it appears that program requirements also did not significantly hinder reform efforts. Generally, though, district administrators told us that federal and state governments have been more concerned with program compliance than educational program quality and student outcomes. Thus, while districts are attempting to focus on student performance, existing program rules continue to require them to direct effort toward documenting educational services for specific students. For example, officials in one district told us that schools with Chapter 1 funding find it especially difficult to account precisely for expenditures for individual Chapter 1 children when school personnel see their efforts directed at the entire school population. Likewise, Chapter 1 relies heavily on standardized norm-referenced tests, to both identify students and assess Chapter 1 student progress nationally, yet these tests are not

[13]Additionally, development of service delivery standards may discourage some districts from implementing reform based on high content standards if substantial resources are necessary to meet the related service delivery standards.

sufficient to measure progress toward the high standards these districts seek for all students.[14]

Officials cited certain provisions in Chapter 1, including schoolwide projects (allowing program funding to be used throughout a school where poverty rates are at least 75 percent) and program improvement, as positive changes because they focus on student outcomes rather than instructional process. Also, there are numerous evaluations of, and reform proposals for, Chapter 1.[15] Some of the findings and recommendations of these studies suggest (1) setting clear, high standards for all students, (2) administering new performance-based assessment systems, and (3) reorienting curriculum and improving instructional practice. Such changes would be compatible with systemwide reform efforts.

Impact on At-Risk Students

Systemwide reform is designed to serve all students, including those at-risk students, such as the disadvantaged and those with limited English proficiency or with disabilities, that federal programs traditionally have served. We did not study in depth how these students fared under reform in the four districts we visited. However, teachers and administrators in two of the districts noted that teachers felt better equipped to deal with at-risk students in the regular classroom, possibly because there were clear expectations for the students and because the teachers felt they could and would receive help and support from the school and district if the students were not progressing. Officials from one district said the proportion of students with disabilities that were mainstreamed had increased during the course of the reform.

On the other hand, success is not guaranteed. For example, in another district, test scores of minorities improved but still lagged far behind those of nonminorities. In response to that finding, the district's school board approved two strategic plans, one in 1986 and one in 1990, aimed at minority student achievement. The district is still looking for ways to improve achievement of minority students in relation to nonminorities.

[14]We recently reported on the implementation of the program improvement provisions of Chapter 1. These provisions require districts to assess Chapter 1 student achievement and, if sufficient progress is not made, to develop and implement program improvement plans. We recommended that legislation be amended to require districts to use multiple indicators of student achievement, not just norm-referenced tests, in assessing program effectiveness. See Chapter 1 Accountability: Greater Focus on Program Goals Needed (GAO/HRD-93, Mar. 29, 1993).

[15]Among them are Making Schools Work for Children in Poverty, Commission on Chapter 1 (Dec. 1992), and "Turning Crisis Into Opportunity," a position paper issued in February 1993 by seven superintendents from large districts in California.

Role of Federal Technical Assistance

The districts' experiences suggest the potential benefit of assistance from federally funded organizations. The federal government supports a variety of technical assistance activities. There are, for example, many technical assistance centers funded through specific programs such as Chapter 1. Other activities include 10 regional education laboratories, which provide technical assistance in support of school improvement activities throughout the nation, and 25 national educational research and development centers, which, among other things, conduct research to help policymakers and practitioners.

The two larger districts had obtained some assistance from these types of federally assisted organizations in helping design or implement their reform. Pittsburgh, for example, relied heavily on a federally funded research center located in Pittsburgh to help conduct its needs assessment and develop standards in the early days of its reform. The two smaller districts, on the other hand, did not seek help from these types of centers and laboratories. One superintendent pointed out that the district used federally funded information networks, such as the Educational Resources Information Center, in conducting research, but noted that on-site consultation and support were needed and that the nearest federal laboratory was a considerable distance from the district, making such assistance difficult. Another district, Johnson City, received a grant from the Department of Education's National Diffusion Network to help other districts use its reform model.

We did not include an analysis of the purpose for, or operations of, the many education technical assistance and research functions being supported by the federal government, nor did we study their capability to meet the future needs of reforming districts. We did note, however, that many of the federal technical assistance centers target specific programs, such as programs for students with limited English proficiency funded under title VII of the Elementary and Secondary Education Act, or Chapter 1. Regional laboratories have and could support reforms in a more general sense than centers associated with individual programs. However, there are only 10 of them nationally, suggesting a relatively limited ability to serve very many districts in any intensive way. Finally, the education research and development centers do provide information and support to reforming districts, but many of these centers focus on discrete parts of the education process, such as assessment or teacher evaluation, rather than reform of the system as a whole.

Conclusions

Systemwide reform holds promise for improving student learning. Having key components of the education system linked together promotes monitoring of student achievement to ensure that progress continues and enables all school personnel to work together to improve student performance. Standards and related curricula provide clear goals, and assessments clearly linked to those standards and curricula allow meaningful measures of progress toward those goals. Adequate instructional materials and professional development are the key tools that teachers and principals need to help students succeed.

Systemwide reform can accommodate a variety of instructional and administrative reforms and, in fact, can provide a framework by which their success can be measured. That is to say that having clear expectations in the form of specific desired outcomes and monitoring at the student, school, and district level can make it possible to determine whether the different approaches are working. Much of the current literature on school reform looks to more decentralized decisionmaking and teacher involvement, in terms of both school management as well as instructional approach. The systemwide model can facilitate that move, since district officials and the community have a clear basis on which to gauge effectiveness.

The experiences in the districts we visited provide some lessons for national efforts to encourage systemwide reform. Reform is slow, evolutionary, and continuous. It demands a great deal of time, commitment, and flexibility from its participants. Local involvement and acceptance of the standards that drive the reform are necessary.

If voluntary national standards and assessments are developed, they could provide direction and serve as a starting point for district reform. But voluntary standards and assessments alone are not likely to be sufficient to ensure systemwide reforms are undertaken or that they are compatible with the national standards. We have outlined some actions the Congress could take if it wishes to encourage districts to undertake systemwide reform. In undertaking these or other actions, it should include federal and state governments as well as private agencies where appropriate. Further, recognizing that some districts and states are already undertaking systemwide reform in the absence of national standards, actions should help ensure those efforts are directed toward the new, higher standards envisioned in current national standard-setting activities. Finally, although these actions are outlined in the context of encouraging district action,

they are not meant to preclude federal support for state or school-based reform.

Matters for Congressional Consideration

If the Congress wishes to encourage district-level systemwide reform, it could enact legislation to do the following:

- Support efforts to develop voluntary high national and state content standards and support development of exemplary assessment methods appropriate to those standards. Standards developed in a process that includes representatives of districts and schools, as well as state and national educators, may hold the most promise for being useful at the local level.
- Ensure availability of technical assistance and professional development to districts implementing or seeking to implement systemwide reform. Professional development here has a broad meaning, including training about reform, participation in developing the reform, and training in instructional techniques and use of new assessments.
- Make existing federal categorical programs more conducive to systemwide reform. Many options exist for changing programs. Congress could, for example, allow waivers of program requirements or give priority for grants to applicants serving targeted groups in the context of systemwide reform. In making these or other changes, such as those recommended by recent studies of Chapter 1, provision should be made to ensure the needs of at-risk students are met.

Congress could also direct the Secretary of Education to do the following:

- Take steps to disseminate information about successful reform efforts. The Secretary could, for example
  - disseminate information about promising district-level models of systemwide reform (standards, assessments, curricula) for other districts to use as a starting point, modifying them as necessary for local needs, or
  - support development of networks among districts implementing or seeking to implement systemwide reform.
- Review the scope and functions of the federal research centers, laboratories, and technical assistance centers to determine the extent to which they could assist in systemwide reform efforts, particularly in setting standards, developing curriculum and assessment methods based on the new standards, and designing professional development.

Agency Comments

We spoke with Department of Education officials who reviewed a draft of this report. They stated that the report, in general, supports the direction the Department is taking with respect to federal programs and their relation to education reform. They said, for example, that the Department is already considering an overall assessment of technical assistance activities with an aim of making them more cohesive. The Department is also considering the potential of the National Diffusion Network to disseminate promising reform models.

Department officials also noted that the issue of professional development raised in this report is critical. They noted that districts face significant difficulties in finding the time and resources to provide training of sufficient duration to make a difference.

Finally, officials cautioned that there is much still unknown about key aspects of the reforms discussed in the report, such as reforms to Chapter 1 and new assessment systems. They said that the federal government must be flexible enough to react if changes in federal programs designed to further reform do not seem to be working, and that it will be important to ensure that students most in need of services are benefiting from reform.

Copies of this report are also being sent to appropriate House and Senate Committees, the Secretary of Education, and other interested parties.

This report was prepared under the direction of Linda G. Morra, Director, Education and Employment Issues, who may be reached on (202) 512-7014 if you or your staff have any questions about it. Other major contributors are listed in appendix V.

Sincerely yours,

Edward A Hensmore

for

Lawrence H. Thompson
Assistant Comptroller General

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Abbreviations

ESEA	Elementary and Secondary Education Act
MAP	Monitoring Achievement in Pittsburgh
NCTM	National Council of Teachers of Mathematics
ODDM	Outcomes-Driven Developmental Model
PROPEL	Perception, Reflection, Production Enhance Learning
SAFE	Systems Approach for Effectiveness

Summary of Reform Efforts in Johnson City, New York

City Profile

Johnson City, New York, is a village of approximately 17,000 people. The school district also draws students from surrounding towns and covers an area with a population of about 27,000. The majority of the population is European American, but Johnson City recently has experienced an influx of immigrants from Southeast Asia and Middle Eastern countries. Until the 1970s, Johnson City was a "shoe town," but since the decline of the shoe industry the village depends on small businesses and industries for its economy.

District Profile

Enrollment in the district's four schools has decreased from about 4,300 in 1970 to the 1991-92 enrollment of about 3,000. The school population reflected that of the village and was about 90 percent White. Even though Johnson City is a working class community, the average per-pupil expenditure was $7,165 in school year 1991-92, an above-average rate nationwide. Approximately one-third of the students received free or reduced price lunches.

Reform Goals and Model

Reform began in the early 1970s in Johnson City when a new superintendent arrived. This superintendent envisioned an educational system that included clear learning objectives and curricula and assessments that were related. Students were to be assessed frequently to ensure they mastered each set of skills before moving on to the next. Students were to be allowed to progress at individual rates, and those who did not master skills were to be provided additional attention until they did. More specifically, the instructional system was designed to work in the following way.

First, the teacher assesses whether students have the prerequisites for the unit; if they do not, the teacher provides instruction on the prerequisites. Then the teacher explains briefly the unit's objectives and what students should know and be able to do after mastering the unit. Next is "best shot" instruction: this is large-group instruction that the teacher believes has the best chance of enabling all the students to achieve mastery. Following this instruction is guided practice in which the teacher informally evaluates how well each student is doing. When the teacher is confident that most, if not all, students can demonstrate mastery, he or she administers a formative test on the unit's objectives. Students who have mastered the objectives then work on enrichment activities, while the others receive corrective instruction. Before the teacher goes on to the next unit, students take a cumulative test on the current unit.

Another new superintendent was appointed in 1982. He had been with the Johnson City school system for many years. He saw a need to build on the ideas and practices of the 1970s to broaden both the goals of the system and the involvement of teachers, parents, and others. The district developed the Outcomes-Driven Developmental Model (ODDM), which was designed to, among other things, provide a comprehensive and clear way to ensure that policies, practices, and proposals are aligned with the district's goals regarding student achievement. In essence, ODDM provides a master plan for improving all facets of school operation with a goal of achieving excellence for all students. ODDM is both a decision-making process and a school improvement model.[1]

Johnson City has adopted five broad student exit behaviors concerning thinking and understanding; process skills, such as problem-solving and communication; self-directed learning; student self-esteem; and concern for others. Parents, teachers, and other community members, including business representatives, formulated these objectives by defining the profile of a graduating student. In each course and grade, program and unit behaviors are delineated and must align with the five exit behaviors. The district is increasing the use of new assessment techniques, portfolios, and demonstrations to better assess mastery of the higher order skills now integrated into the curriculum. The district also is attempting to develop ways to assess outcomes, such as self-esteem, but has not yet introduced those assessments districtwide.

A third new superintendent took over the district in 1993. He too had been with the district for many years, and he anticipated continuing ODDM and efforts to achieve the five exit behaviors.

Implementation Process

Implementation of the reforms in Johnson City has been evolutionary. At all stages teachers have been involved, though increasingly so over time. As the first reforms were being undertaken in the 1970s, the superintendent began with small groups of teachers. He sought to increase the professionalism of teachers and encouraged them to base instructional decisions on educational research. He started with a small pilot project of six teachers, then worked with more and more groups of teachers in this way to increase their professionalism. He directed the teachers to create a system with the philosophy that all students will learn under the

[1]ODDM is a process that emphasizes the need to define desired student outcomes and make decisions in the context of how they do or do not support those outcomes. Johnson City has been given a grant under the Department of Education's National Diffusion Network to help other districts implement ODDM. Officials told us that 70 districts have adopted the ODDM model.

appropriate learning conditions. The current superintendent said that he would describe the planning process now as "collaborative visioning," that is, neither top down nor bottom up. However, he said that the early reforms did not involve the teachers' union or the business community early enough in the process.

Throughout the 1980s the district obtained technical assistance from a variety of private consultants who worked with staff to develop the student outcomes and write the curriculum. The district currently uses a "lead teacher" approach to developing new instructional approaches. The district provides time and resources for teachers to research a specific approach or issue, including receiving training so those teachers become the district "experts." These lead teachers then instruct other teachers in the district who want to implement the change.

Professional development of teachers is a major emphasis in the district. Officials said the early reforms did not include enough teacher training. They explained that the system implemented in the 1970s had difficulties in the beginning. For one thing, they said that teachers took too literally the concept that students could progress at their own rate. Teachers did not make sufficient effort to help them along. Officials told us that professional development was increased and, over time, the system was more effective.

Officials told us that, out of an approximately $22 million budget in school year 1991-92, $200,000, or about 1 percent, was spent on staff development. The expenses covered, among other things, providing substitutes so that teachers could attend training and providing training during the summer. Officials also noted, however, that because of district funding constraints, the amount of paid time for professional development recently had to be reduced from 2 weeks per year to 1.

Achievement Data

Standardized, norm-referenced test data for years 1980-1992, given in grade equivalents, shows student growth throughout the period. For example, students in a first grade cohort[2] in 1985 who had an average grade equivalent of 2.3 in reading were a half year above the national norm of 1.8. In 1987, they were nearly 2 years above the national norm. In mathematics, this cohort showed the same kind of gains.

[2]Data for a student cohort follows the same group of students over time. That is, data are given for the district's first graders in 1985, third graders in 1987, etc.

Table I.1: Johnson City Central School District Systemwide Results, California Achievement Tests, Grade Equivalents for One Student Cohort

	National norm	1985	1987	1989	1991
Reading	1.8	2.3			
	3.8		5.6		
	5.8			7.1	
	7.8				9.1
Mathematics	1.8	2.6			
	3.8		5.6		
	5.8			7.7	
	7.8				9.2

Note: These data do not include scores for special education students.

Summary of Reform Efforts in Moss Point, Mississippi

City Profile

Moss Point is a small town of about 20,000 located on the Gulf Coast in southern Mississippi. There is moderate mobility in this community, mostly due to construction jobs, and the town is periodically damaged by hurricanes and floods.

District Profile

Moss Point's 1991-92 school year enrollment for the district's 9 schools was 5,600. The racial composition in 1991-92 was 61 percent African-American and 39 percent White. Sixty-five percent of the students received free or reduced price lunches. According to district officials, the local tax rate is the highest in the state, yet the district is poor. They said a key funding problem is that Moss Point does not have much industry to tax. Also, the district's school year 1991-92 average per-pupil expenditure of $3,315 was well below the national average.

Reform Model

The district began reform in the late 1970s when the current superintendent was appointed. He brought to the job prior experience with the Systems Approach for Effectiveness (SAFE),[1] a learner-centered program whose components include instructional leadership and management. In 1978, the school board approved the installation of SAFE. The SAFE design calls for school personnel, assisted by business and other community members, to establish graduation requirements, or exit competencies, for students. Professionals then develop a skills continuum, called a Functional Learning Path, from elementary through graduation, and the continuum is revised according to student success with the skills. It is designed as a self-correcting system in which students cannot advance without meeting certain prerequisites.

In 1986, the district expanded SAFE to incorporate some higher order skills and to change the learning paths to reflect a less sequential, more holistic view of learning. This is an ongoing process, and district officials said they need to do more to incorporate higher order skills.

In the early 1980s, new instructional strategies, such as Arkansas' Program for Effective Teaching, were selected for use districtwide. Later, to address the new, higher order skills, the district began selecting other instructional techniques and materials, including Writing Across the Curriculum, Semantic Mapping, the Think Network, and Writing to Write. The district also began installing computers as an instructional tool. Between 1990 and the present, Moss Point made a commitment to

[1]SAFE was developed by Robert E. Corrigan's Institute of Effective Learning, New Orleans, Louisiana.

incorporate technology into its performance system to ensure that every student would build higher order skills. All schools have computer labs, which are used for direct computer instruction and for instruction and reinforcement in the other subjects. Students at Moss Point High School are producing an audio-visual yearbook on videotape. In addition, instruction in the main subjects at all grade levels now takes place in 2-hour blocks.

In the Moss Point district, students are tested frequently, every 2 to 3 weeks, with short skill mastery tests. Results are graded electronically and returned to teachers quickly so that they can determine whether each student has mastered the skills. For students who have not, the teachers then provide further attention to those skills, often in the context of the next skill area. Teachers meet in groups to discuss, among other things, individual student performance. They seek to understand why some students did not master specific skills and to help each other in developing approaches to help those students. Principals also receive test results, and they meet with teachers to help develop approaches to improve performance of individual students. Teachers in the district have also begun using other types of student assessments, such as portfolios and writing checklists, to assess higher order skills.

District teachers are evaluated using an instrument that is focused on student performance as measured by criterion-referenced tests—tests that relate specifically to the district's curriculum and processes of instruction.

Implementation Process

As a starting point for the reform, district staff determined what they wanted students to be able to do when they graduated. As part of that effort, the superintendent informally queried local business leaders about the types of skills graduates needed to be effective employees.

From 1978 until 1982, in the first phase of the reform, outside consultants trained administrators in management techniques, especially in the management by objectives system. Then administrators and teachers were trained in the SAFE instructional systems design. These people became known as instructional leaders, and they trained other teachers to write the Functional Learning Paths with learning objectives and related criterion-referenced tests. The teachers first wrote objectives and tests for grades one through nine. Administrators established an instructional management plan to track student progress. Originally, the mastery tests were graded by hand, but teachers complained of the burden. A computer

program was developed to improve instructional management and to grade the mastery tests electronically.

Reforms continued between 1982 and 1986. Staff wrote objectives and tests for high school academic classes. The Mississippi Education Reform Act of 1982 created a State Board of Education that established a state criterion-referenced test. District officials said that SAFE was already 80 percent aligned with the state objectives, but staff worked to align their new norm-referenced test (Stanford Achievement Test) objectives with SAFE. In addition, after trying three times, in 1986 the school board persuaded the community to pass a $10 million bond issue for building renovation and construction.

Revisions to the Functional Learning Paths continue. To this end, the district established teacher cadres—groups of teachers who revise the Functional Learning Paths and assessment methods. Teachers at Moss Point said that they were very active in the district's instructional program and that they felt empowered to train others and to try new instructional strategies. The district emphasizes the need to train teachers in new instructional materials or approaches before they are introduced into classrooms. However, the teachers we spoke with also said that many teachers had been resistant to the changes. They noted some ongoing difficulties, too. For example, they reported that some older teachers had trouble with the new technology.

Achievement Data

Moss Point students have improved their skills, as measured by nationally normed standardized achievement tests. Only about one-third of fourth grade students were at the national norm before the reforms compared with about two-thirds of the students on a recent test. Gains were greater for sixth grade students, four-fifths of whom were at the national norm in language. Similar gains were made by eighth graders, who had extremely low scores in mathematics before the reform but who have been brought up to the national norm since.

Table II.1: Moss Point Public School Systemwide Results for Standardized Achievement Tests, Average Percent of Students at or Above the National Norm

	Grade 4		Grade 6		Grade 8	
	1978	1992	1978	1992	1978	1992
Reading	32	62	29	60	21	48
Language	36	71	34	78	26	60
Mathematics	29	66	26	71	18	55

Note 1: Students took the California Achievement Test in 1978 and the Stanford Achievement Test in 1992.

Note 2: Numbers calculated are school averages rather than districtwide summaries.

Note 3: These data do not include scores for special education students.

Summary of Reform Efforts in Pittsburgh, Pennsylvania

City Profile

Pittsburgh, Pennsylvania's population has decreased nearly 30 percent in the last 20 years, from about 520,000 to about 370,000. The city has made the shift from a manufacturing to a service-based economy, driven today by health care, education, and high technology activities. Pittsburgh is the headquarters for businesses such as Alcoa and Westinghouse and is also home to several prestigious research universities and hospitals.

District Profile

According to a RAND Corporation analysis,[1] the decline of Pittsburgh's manufacturing base in the 1970s was accompanied by a stressful school desegregation process, test score declines, open conflict between the school board and school administration, and teacher strikes and work stoppages. Enrollment in the district's 84 schools has decreased from about 75,000 in 1966 to about 40,000 in school year 1991-92. The current racial composition (about 52 percent African-American, 46 percent White, and 2 percent other races) has been stable for the past decade. Fifty-two percent of the students received free or reduced price lunches in school year 1991-92, and the average per-pupil expenditure of $6,207 was relatively high compared to the national average.

Reform Goals and Model

A new superintendent, with a strong background in educational research and evaluation, joined the district in 1980.[2] One of his first steps was to conduct a districtwide needs assessment, which looked at indicators of student achievement, such as test scores, and included a survey of district personnel, students, and community members to obtain their perceptions of conditions in the district's schools. He then submitted a strategic plan to the Board of Education, and the board approved a set of priority area goals. The major goal was to improve student achievement in the basic skills. There were two more iterations of the strategic plan. In 1986, the main goals were to improve student achievement in math and science, and to raise minority test scores to close the gap between minorities and nonminorities. The third plan in 1990 emphasized early childhood and multicultural education.

Monitoring Achievement in Pittsburgh (MAP) was begun in 1980 to meet the goals set forth in the strategic plan. It was an instructional testing system designed to increase student achievement in basic skills. Components included the identification of skill expectations for each subject and grade,

[1]Paul Hill, Arthur S. Wise, and Leslie Shapiro, Educational Progress: Cities Mobilize to Improve Their Schools, RAND Corporation (Jan. 1989).

[2]He retired in 1992.

focused instruction, monitoring achievement, appropriate instructional resources, and staff development. MAP was designed to closely link instruction and testing. Students were assessed frequently with MAP assessment instruments (4 to 6 times per year) for short periods (12 minutes at a time). These MAP tests were one measure, along with other student work, teachers were to use to judge student progress and plan instruction.

In January 1993, Pittsburgh discontinued MAP. This action, according to a district official, was a cost-saving measure. MAP was expensive because it required a significant amount of staff time to update the curriculum and tests annually. Also, the testing and computer scoring were costly. He added, however, that MAP was focused on basic skills, and the district, since 1985, has been implementing another system—the Syllabus Examination Program—that is designed to include high standards. Though only operating in grades 8 through 12 now, this program is to be expanded to all grades.

Through efforts such as the Syllabus Examination Program, Pittsburgh is now moving to incorporate higher order skills for all students; it is also moving to fundamentally restructure its schools. The district's current vision includes a goal that all students will achieve at world class standards and that all parties in students' education (students, staff, parents, and community) will be held accountable for the results. It is incorporating the National Council of Teachers of Mathematics standards into its math curriculum and is participating in the New Standards Project to develop assessments.

In beginning to restructure its schools, Pittsburgh has identified four areas for restructuring: (1) student learning, (2) community collaboration, (3) professional life of teachers, and (4) school governance. The first two restructured schools opened in school year 1992-93. Among other things, these schools are designed to (1) move away from teacher-directed instruction toward student-centered learning; (2) employ multi-age grouping; (3) use teacher-developed assessments, such as portfolios and demonstrations; and (4) have principals serve as instructional leaders.

The district also has been part of a consortium that developed a nationally recognized assessment model: Perception, Reflection, Production Enhance Learning (PROPEL). Students in PROPEL produce sketchbooks and journals, compile portfolios, and complete carefully sequenced classroom exercises. These assessments provide more rapid, qualitative feedback to

students and teachers than current tests. In school year 1991-92, PROPEL officials coordinated the production of 1,400 portfolios as part of the English curriculum.

Pittsburgh is working to use portfolio assessments to make a public accounting of the district's performance. An audit committee is sponsoring teacher workshops to derive and evaluate a representative sample of student PROPEL portfolios; arranging for external audit of those evaluations by independent reviewers, including parents, union officials, and business and community leaders; and publicly reporting the results of its efforts.

Implementation Process

The district relied heavily on outside technical assistance to help carry out its reforms. For example, the district contracted with the Learning Research and Development Center at the University of Pittsburgh for its initial assessment. The Center has maintained an ongoing relationship with the district. The district is also actively involved in joint projects with various organizations. As noted earlier, the district is working with the New Standards Project; it is also working with the Educational Testing Service and Project Zero at the Harvard Graduate School of Education on PROPEL. District officials said that Pittsburgh has received $1.5 million from private foundations to design its new restructured schools.

Teacher involvement has been a key component of the reforms since the beginning, and the district has also invested heavily in professional development throughout the reforms. The superintendent sought to enhance teachers' professional self-esteem, and thus the district insisted that MAP materials be written by the teaching staff. First, administrators were trained in MAP; then, the administrators became trainers for their staffs.

Further, from 1981 through 1991, Pittsburgh budgeted a sizeable amount of money—1 percent of the district's General Fund—for staff development. In the 1980s, Pittsburgh established three teacher centers. The high school center operated from 1983 until 1987, the elementary from 1985 until 1990, and the middle school center from 1987 until 1991. The centers were created to refine teachers' instructional skills to achieve the district goal of improving student achievement. Teachers, as many as 50 at a time, would take classes at the center for a period of 5 to 8 weeks. Substitute teachers were provided to free the teachers' time for the training. Teachers participated in seminars in various education models, such as "Increasing Teacher Effectiveness" and on other districtwide initiatives such as

"critical thinking skills." The district also developed a program to provide follow-up for teachers when they left the teacher centers. A peer program of visiting and residential teachers allowed center participants to visit each others' classrooms and provide feedback on new instructional strategies.

The centers were closed primarily in response to budget constraints. Currently, teachers engage in a variety of staff development activities, including intensive summer workshops, after-school sessions, and monthly support meetings.

The district has also included community members in the reform process. In the early days of reform, the committee set up to conduct the needs assessment included many community members. More recently, the Task Force on School Restructuring, charged with planning the reforms and making recommendations to the school board, consists of approximately 300 people organized into 9 subcommittees responsible for areas such as student outcomes, school-based management, central administration, and multicultural education. The district has conducted community forums to gain support for the new reforms.

Achievement Data

Levels of student achievement in Pittsburgh, as measured by the California Achievement Test, improved from 1981 to 1987. On this national, norm-referenced test, in 1981 about half of the students in grades 1 through 5 were at or above the national norm for language. By 1987, over three-quarters of these students were at or above that norm. Likewise, students in grades 6 through 8 made gains in math. Pittsburgh officials attributed improved scores to the increased emphasis on instruction in basic skills. MAP, with its systematic method of identifying and teaching these basic skills, was a key part of the instructional process.

Test scores rose for African-American students, White students, and for the district as a whole. However, a gap between African-American and White test scores has not been closed. Also, in 1988, Pittsburgh started using new test norms. Test scores fell—a common phenomenon when norms are changed—and have not significantly increased since then. Officials believe that efforts are necessary to further improve learning and, therefore, are undertaking the reforms discussed earlier to include higher order skills and restructure schools.

Table III.1: Pittsburgh Public School Systemwide Results for California Achievement Tests, Percent of Students at or Above the National Norm

	Grades 1-5		Grades 6-8		Grades 9-12	
	1981	1987	1981	1987	1983	1987
Reading	51	73	46	57	45	53
Language	52	77	42	74	45	69
Mathematics	59	74	50	72	[a]	[a]

Note: Scores for special education students are not included in these data.

[a]Students in grades 9 through 12 do not participate in California Achievement Tests in the area of mathematics.

Summary of Reform Efforts in San Diego, California

City Profile

San Diego, California, with a multiethnic population of approximately 1.1 million in 1990, enjoyed a strong and growing economy throughout the 1980s, fueled by a population increase at double the U.S. rate. Although now facing difficult economic times, San Diego's economy shows some growth, especially in biotechnology and other scientific companies, and is supported by a sound tourist industry. San Diego is also the home of four military bases.

District Profile

San Diego City Schools is the eighth largest district in the United States. Mirroring the city, the district's enrollment has steadily increased and diversified over the last decade. In school-year 1991-92, 125,125 students were enrolled in 149 schools. About 65 percent of the students were minorities (Hispanic, Asian, African-American, Other). Students spoke over 60 different languages, and the district had 31,000 students with limited English proficiency—an increase of over 300 percent in the last 10 years. Forty-nine percent of the students received free or reduced price lunches. San Diego's average per-pupil expenditure of $4,670 was below the national average.

Reform Goals and Model

The current superintendent joined San Diego in 1982, with a school board mandate to be an advocate for minority children, build communication with the community, and reform the district administration. He began to simplify the school bureaucracy, promoted several female and minority educators to senior positions, and increased business participation through an adopt-a-school program.

In May 1986, the superintendent began a process to reform all of the district's schools. In 1987 a study by a commission of prominent San Diego citizens called for a "fundamental restructuring of schools." A November 1988 school board policy stated the purposes of school restructuring as improving the quality of instruction and student achievement. In February 1992, the board articulated the district's mission "to educate all students in an integrated setting to become responsible, literate, thinking, and contributing members of a multicultural society through excellence in teaching and learning."

From early in its restructuring efforts, San Diego concentrated on strengthening governance structures at schools, and reducing and reorganizing the central office to act as "enablers rather than enforcers." School governance teams were established to have site autonomy and deal

with substantive issues of school organization, staffing, budget, and accountability. This included a determination of the school's needs and expenditure of the funds received from various sources.

San Diego relies heavily on the nationally recognized California state curriculum frameworks as a basis for its learning standards and curricula. The frameworks were developed over several years by teachers, subject matter experts, and parents. They provide a valuable resource for answering questions such as, What are all students to learn in mathematics for grades K through 12? San Diego has also been working on district performance-based objectives in some subject areas. In January 1993, San Diego completed "observable student performance behaviors" for grades K through 6 for English/language arts. Most instructional resources are purchased from a list of state-approved instructional materials. According to district officials, the state will not approve a textbook unless it follows the frameworks, providing an important link between the curriculum and the instructional materials used in San Diego.

San Diego has been working on developing an equitable and meaningful accountability system for almost 3 years. A school board-appointed committee recommended, and the board has adopted, a definition, policy, and set of guiding principles on accountability. The proposed system would be inclusive and establish responsibility and accountability for board members, administrators, principals, teachers, students, parents, and business and community members.

Implementation Process

Throughout the reform process, the district has involved representatives from all facets of the community. A leadership group was established to develop plans for and coordinate restructuring efforts. That team includes teachers, parents, administrators, and community members. Early in the reform process this group sought to broaden the district's knowledge and the public's awareness of reform by sponsoring conferences and seminars. Some of these events were supported by local universities, businesses, and philanthropic organizations.

Membership in the leadership group was reorganized in 1991 to achieve more equitable representation of stakeholders, including employee association groups. Employee association support was important to reform efforts. In October 1988, after 10 years of collective bargaining, the board and teachers' association signed a 4-year contract. The contract recognized that under restructuring teachers would be more involved in

school-level decisions and be evaluated under new accountability systems, and that schedules and learning activities would change.

For 2 years, San Diego has been a partner in the New Standards Project and has been involved in developing and testing standards and assessment tools for grades 4, 8, and 10 in language arts and mathematics. The district has also been participating in the National Alliance for Restructuring Education project for the last 3 years. The Alliance, which recently was awarded a New American Schools Development Corporation grant, builds on the New Standards Project and proposes to connect schools to the curriculum and institutional resources needed to perform to these high standards.

During the early phases of the restructuring effort, there was intensive training offered in participatory decision-making, team-building, and education on the restructuring movement. San Diego officials now are focusing professional development on the more traditional areas of curriculum, learning, and new staff development training. One significant effort is in the area of language arts, which is aligned with the key goals of the restructuring efforts. For the past 5 years the district has offered a summer Interdisciplinary Curriculum Institute, which is an intensive 2-week course on team-building and curriculum development for teachers. These and other similar seminars have been sponsored with funds from foundations. Additionally, under a state program, schools can excuse students for up to 8 days a year to allow professional development for teachers.

Not all schools began restructuring immediately. In May 1988, 25 schools had committed to restructuring. In September 1991, the superintendent reported that some schools had functional governance teams, others were deliberating on how to form teams, and others were struggling to begin. By June of 1992, all schools had governance teams. The superintendent acknowledged that bringing all schools into the restructuring effort was underestimated in terms of the amount of time, technical assistance, and training required.

District officials said that developing the accountability system has also required considerable negotiation. The major issues of contention revolve around the employee associations' concern about how much and what kind of teacher accountability there should be, and concerns from ethnic community representatives about how gaps in achievement scores will be addressed.

Major Contributors to This Report

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